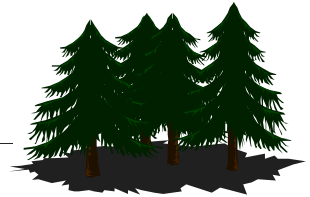
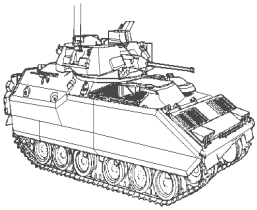


ITAM



The Bridge

ISSUE 1

Winter 1997

Bridging the Gap Between Army Training & Environmental Stewardship

Under the Guidance of the ITAM Executive Management Committee

Land Condition Trend Analysis II

What's Going On?

In December 1996, the Army Environmental Center (AEC) briefed COL Trahan, ITAM proponent of the Office of the Deputy Chief of Staff for Operations and Plans (ODCSOPS) and COL Dries of the Office of the Director of Environmental Programs (ODEP) on the status, findings, and preliminary recommendations from the Land Condition Trend Analysis II (LCTA II) workshops that occurred during 1996. The briefing to ODCSOPS and ODEP laid the groundwork for a briefing to the Council of Colonels, tentatively scheduled for February 1997.

In April 1995 the Army's ITAM community identified a number of issues that initiated the concept of LCTA II. As a result, AEC sponsored two meetings; one in January and one in August of 1996. Range operations and environmental professionals at the Headquarters Department of the Army (HQDA), Major Command (MACOM), and installation-levels attended the meetings. Participants from 24 installations attended the January meeting participants from 21 installations attended the August meeting. In all, the participants represented 11 ecoregions.

Four Army-wide objectives and a corresponding and prioritized list of information requirements resulted from the January Workshop. A report

entitled *LCTA II Workshop Report January 1996* documents the proceedings.

A set of relevant HQDA, MACOM and installation level range operations requirements resulted from the August meeting. Of equal importance were the presentations describing the data collection methods used by individual installations. A forthcoming report entitled *LCTA II Workshop Report -- 6-7 August 1996* documents the proceedings and provides related findings and recommendations. This report will be available following the Feb 97 meeting of the Council of Colonels and ITAM Program Management Review (PMR) 97-1 in April 97.

For the LCTA II January Workshop Report or other LCTA II information, visit our Web Site at <http://www.army-itam.com> If you don't have access to our Web Site, please request information from Mr. Steve Sekscienski at: DSN -- 584-1562, Commercial -- (410) 671-1562, or Email -- sekscien@aec.apgea.army.mil

For a list of the issues that initiated the LCTA II concept, see Page 11.

Technical Support Services Provided Under AEC Contract

Under a contract with the United States Army Environmental Center (USAEC), free technical support is available to installations, major Army commands, Headquarters, Department of the Army (HQDA), and other agencies who participate in the Army's Integrated Training Area Management (ITAM) program. The types of support available at no-cost include:

- Hot-line phone support to help resolve issues and/or answer ITAM related questions.
- Distribution of ITAM related technical literature.
- Training.
- On-site visits.

As the Army's technical support agency for the ITAM program, USAEC is responsible for providing guidance and technical assistance regarding ITAM disciplines to all components of the US Army. At the present time, the Center for the Ecological Management of Military Lands (CEMML) provides technical support at no-cost to ITAM participants, using funds provided by the USAEC.

CEMML offers specialized experience with the Land Condition-Trend Analysis (LCTA) component of the ITAM program, including natural resources inventorying, land management, data analyses, and information management. The LCTA expertise and other technical assistance offered through CEMML include data collection, analysis, and land management methods; quality assurance, control, and data analysis; technical training; and information management and computer system related support. Specifics for each category include:

- *Methodologies*: inventory and monitoring guidance including remote sensing and plot allocation techniques, field data collection, and use of data from other agencies. This includes evaluation of methodologies to meet specific LCTA program objectives.
- *Quality assurance, control, and analysis*: reviewing integrity of LCTA data and

documents, basic and advanced data analysis support.

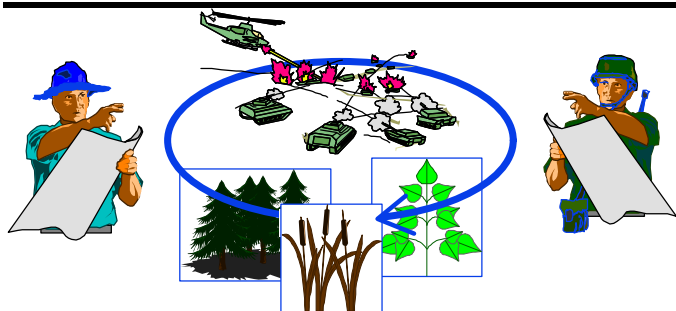
- *Technical training*: technical training for ITAM and LCTA coordinators and field crews on the LCTA component of ITAM, including LCTA data summary and analysis, database management, and Geographic Information Systems (GIS).
- *Computer systems*: hardware, software, and networking support for hand held data recorders, Global Position Systems, personal computers, and workstations that incorporates relational database management and geographic information systems, and data entry, management, and analysis.

To acquire telephone assistance, request technical literature, or inquire about training opportunities contact CEMML at (970) 491-7190, or send your request through electronic mail to Support@levity.cemml.colostate.edu

Training provided at CEMML facilities is free of charge, but installations are responsible for travel, lodging, and per diem expenses. To request on-site visits by CEMML requires coordination through USAEC.

The USAEC Conservation Branch POC for this effort is Mr. Steve Sekscienski. Mr. Sekscienski may be reached at (410) 671-1562. All guidance and training provided through CEMML will be consistent with the ITAM Program Strategy developed by HQDA (August 1995).

The current arrangement to acquire no-cost technical support expires March 15, 1997. Arrangements for future support will be posted in a future edition of *The Bridge* and will also be posted on the *ITAM Homepage*.



SOIL STABILIZATION AT THE NATIONAL TRAINING CENTER

The National Training Center at Ft. Irwin, a desert environment, encounters frequent dust problems. The desert soils and high winds, combined with heavy training usage, create potentially hazardous dust conditions. One area where dust problems are most evident is at Bicycle Lake Army Airfield, which is our helicopter hot refuel and staging site.

As helicopters approach the airfield to land they fly low over a dry lake bed, which is a substrate composed of very fine particles. The landing of helicopters in a desert environment causes brown-outs that can result in safety hazards, general maintenance problems, and specific problems on our main tank trails. Deploying convoys also generate large dust clouds that can create both safety and environmental issues.

After airfield personnel approached ITAM personnel about possible solutions to the dust produced by helicopter rotor wash, the Land Rehabilitation and Maintenance (LRAM) personnel at Ft. Irwin tested a variety of surface stabilization materials. As a result of the tests, we selected *Soil Sement*, a latex polymer, to treat problem dust areas in and around the cantonment. We then coordinated with the airfield manager to have the area around the tarmac ripped and graded to remove gullies that had formed. Then on 28 June 1996, we sprayed a light application of Soil Sement over the area.

Although the light application helped significantly, it became apparent that we needed to apply a heavier rate to withstand the tremendous force generated by the larger helicopters. Before applying the second application on 22 October 1996, we sprayed the area with water and rolled it to increase surface compaction of the playa substrate. We expected the increased compaction, heavier application rate, and compounding effect of the second application to greatly increase the effectiveness and longevity of this dust control measure. Since the October application of Soil Sement, airfield use has been intense, and airfield personnel have noted a marked improvement in landing and takeoff conditions.

LRAM lessons learned from this project include 1) evidence supporting the relative importance of site preparation to product effectiveness, 2) increased communication and cooperation improves our ability to solve mission related problems, and 3) there is a need to experiment with and utilize new products and methods.

The point of contact at the National Training Center is Wayne Johnson, Ft. Irwin NTC ITAM Program Manager DSN 470-3169. COM (619) 380-3169.

Conservation Assistance Available from AEC

The US Army Environmental Center (AEC) established the Conservation Assistance Program (CAP) in October, 1995 to provide rapid response technical assistance for natural resources problems. Formerly referred to as the Installation Natural Resources Assistance Program (INRAP), the program was expanded to include cultural resources in June 1996, and the name was changed to reflect the expanded coverage. The purpose of the CAP is to provide technical assistance to Army installations for issues under the Department of Defense Conservation Pillar.

As part of their overall strategy for promoting quick, one-stop access to qualified resources, the USAEC designed CAP to give Army resources managers access to services and expertise provided by the US Army Corps of Engineers (USACE) Research Laboratory personnel, which include

- Construction Engineering Research Laboratory (CERL)
- Cold Regions Research Engineering Laboratory (CRREL)
- Topographic Engineering Center (TEC)
- Waterways Experiment Station (WES)

In addition to the Army labs, the CAP enables access to the expertise of other organizations such as US Forest Service, the Center for Health Promotion and Preventive Medicine (CHPPM), and USAEC.

The CAP supports up to one week worth of technical assistance, including travel, all at no-cost to the installation. Examples of the types of assistance that CAP provides include: sampling procedures and training, study design, data analysis, scopes of work, GIS and remote sensing, revegetation and erosion control, cultural resources, and other conservation areas.

Assistance to installations that has been provided under CAP includes:

- Revegetation design and specifications
- Remote sensing for Phase II cultural resources study
- BMP's for erosion control
- Revisions to INRMP
- Field training for bat mist netting
- Scope of Work for fauna and flora studies
- Literature searches and reviews

What Are You Up To?

Please submit your comments, concerns, or ITAM related MACOM approved stories for publication to:

COMMANDER
USAEC
ATTN SFIM-AEC-ECN MS BRIGHT
LIETZAN RD BLDG 4435
APG EA MD 21010
COM: (410) 671-1563
DSN: 584-1563
FAX: (410) 671-1680
E-mail: tabright@aec.apgea.army.mil

The Bridge wants to Know!

The Bridge is a publication of the Army Environmental Center and is a means to share information about trends, events, and current thoughts related to the Army's ITAM Program.

Materials and opinions appearing in this newsletter, are not necessarily endorsed by the AEC. Unless articles appearing in *The Bridge* are copyrighted, we encourage you to reproduce and share them. When reprinting copyrighted materials, please credit the source and author, and send us a copy.

- Small area wetland delineation
- Scope of Work and study design for Indiana bat survey

When asked on customer satisfaction surveys to “estimate your percent satisfaction with your CAP project”, installation response rates average 99% approval. When asked “would you use CAP again?”, installation response has rates are 100% “yes”. Examples of other comments from installations are as follows:

- “It was an excellent support effort.” Dr. Chris Hamilton, Environmental Programs Management Branch, Environmental Management Division, Directorate of Public Works, Fort Benning.
- “I could not recommend a way to improve something (CAP) that worked so well.” Tony Rizzio, Division of Public Works, Fort Eustis.
- “Probably one of the fastest responses I’ve received since working with DA.” Billy Burns, Forestry and Natural Resources Office, Anniston Army Depot.
- “The whole process was seamless, and it involved a minimum of paperwork.” Wayne Boyko, Cultural Resources Manager, Fort Bragg.

To take advantage of CAP offerings, Installations can request assistance for conservation projects over the phone, fax, mail, or e-mail. The installation should be prepared to provide a description of the conservation problem, specific assistance that is needed, and the date support is required.

AIAD PROVIDES INSTALLATION EXPERIENCE FOR CADETS

The United States Military Academy (USMA) provides qualified cadets with the opportunity to participate in the Army’s Integrated Training Area Management (ITAM) program as part of the Academy’s Academic Individual Advanced Development (AIAD) program.

The AIAD program provides interested cadets with the chance to see the workings of the Army’s ITAM program. In turn, the program provides sponsors with a future Army leader educated in an academic discipline that supports ITAM initiatives, as well as the military aspects of the Army.

The cadet spends three weeks at your installation assisting you on a variety of ITAM or environmentally related tasks. Last summer a cadet assisted an installation on water quality assessments. He was equipped with water quality monitoring equipment that he had used in his previous courses and was sent to the installation to assist them. He conducted water quality monitoring activities and furnished the installation a summary report.

The cadets are in our environmental science, mapping/charting and geodesy, physical geography or environmental engineering programs. Although the cadets individual program may differ, here is a listing of the courses that he/she can take before going on AIAD:

- College Chemistry
- Environmental Chemistry
- Organic Chemistry
- Physical Geology
- Thermodynamics
- Environmental Science
- Remote Sensing
- Geographical Information Systems (GIS)
- Meteorology and Air Pollution
- Surveying
- Fluid Mechanics
- Introduction to Environmental Engineering
- Environmental System Analysis.

Their course work exposes them to the Army's environmental stewardship mission and introduces them to the design of water supply and treatment systems, nonpoint source pollution, management of solid/hazardous waste and laboratory procedures for monitoring environmental parameters. The Environmental System Analysis course exposes the students to the various physical, biological and chemical processes used in environmental engineering and science. Along with concentrating in the environmental

discipline they are educated in the following areas: Military Training, Small Unit Tactics, English, History, Social Sciences, Leadership, Math, Earth Sciences, Computers, and Physics.

Meaningful assignments environmental assignments could be: conducting field survey work, reviewing proposals, coordinating proposals amongst the various players, conducting environmental parameters monitoring (water quality parameters, sediment samples, air samples), developing nonpoint source pollution prevention alternatives, LRAM project assistance, LCTA data collection and analysis, and developing environmental awareness products for units.

If you would like more information about ITAM training for cadets, please contact

US MILITARY ACADEMY
Department of Geography and Environmental
Engineering Center for Geographic Studies
Washington Hall, BLDG 745A
West Point, NY 10996-1695

You may also email us at the following address:
bd1234@westpoint-emh2.usma.army.mil

FY 96 ITAM Accomplishments Dugway Proving Ground

ITAM personnel assisted in the establishment of a new training area called West Granite Mountain Training Area. West Granite Mountain Training Area encompasses 3,394 acres and currently contains 12 new firing points.

The new training area will allow state and national guard units to engage in live fire exercises and fire artillery from a new direction into existing impact areas. This will greatly enhance the opportunities for realistic training. It will also allow DPG land managers the ability to better rotate training exercises to allow dilapidated areas a recovery period. (3,394 acres)

ITAM personnel performed the necessary environmental clearances, including both cultural and floristic surveys of the effected environment. The ITAM GIS coordinator used a GPS to establish the survey grids for the archeological survey. A GPS was used to verify firing point coordinates and ingress/regress roads. The information was downloaded into GIS database. A map of the Granite Mountain Firing Range was created and made available for interested parties.

A vegetation mapping project was also initiated. Though in the beginning stages, the technology was procured and the methodology resolved. Sample field data was collected and analyzed to validate methodology. Aerial photographs were scanned and entered into the GIS. The project is now on hold until the spring/summer 97. The final product (vegetation map) is focused on the training ranges at DPG. The map will allow users to identify areas of different cover type for concealment purposes as well as define use parameters based on plant community resiliency. It will provide land managers a means to differentiate land use patterns with landscape patterns, and devise an equitable management system between the land users and environmental tolerances.

ITAM resources have also been applied to the development of DPG's Training Area Management Plan during the past two fiscal years. ITAM personnel have worked closely with the contract carrier in providing GIS, GPS, vegetation, and historical data. The Training Area Management Plan is a comprehensive plan designed to tether land use requirements of trainers with land resource capabilities on a sustainable basis.

Announcing A Call for Papers for the Sixth Annual ITAM Workshop 26 - 28 August 1997 - San Antonio, Texas

A call for oral and poster presentations from any person involved in the management of Department of Defense lands is hereby issued for the Sixth Annual ITAM Workshop, formerly known as the LRAM and the LRAM/ITAM Workshops. This workshop is the forum for the scientific exchange of technologies, ideas, experiences, and lessons learned that relate to the application of Integrated Training Area Management on military training and testing land.

Suggested topics for presentations and posters include: General information, Bridging the Gap - Successful communication, understanding and enhanced utilization of training and environmental management capabilities; Integrating the ITAM components; Providing ITAM products such as GIS overlays and educational materials to the Range Operations/Training staff; and Incorporating LRAM projects with training, CRAM, LCTA, EA, and TRI. Papers on related topic will also be entertained. (Continued on Page 11.)

AP Hill Named RSC for ITAM GIS Support

FY 96 saw Virginia's Fort AP Hill selected as a Regional Support Center (RSC) for ITAM GIS support. *The ITAM Program Strategy* described the RSC concept for ITAM. FORT AP Hill RSC is a joint effort between the USAEC, USATSC, TRADOC, and AP Hill.

The goal of RSC at Fort AP Hill is to provide cost effective GIS and ITAM program support alternatives for Army, National Guard, and DoD facilities. The GIS RSC expressly supports maximized training readiness and sustained use of Army training lands. AP Hill will achieve its goals by reducing duplicative costs, pooling assets, serving as a central repository for lessons learned, and decreasing the ITAM learning curves for installations associated with the RSC efforts.

The technical support for the regional support center includes skills to manipulate geospatial and tabular data and produce cartographic outputs needed by range operations and natural resources personnel who manage use of training, lands or natural resources.

Regional support will eventually address all aspects of the ITAM program, and will enable sharing of technical advice and knowledge regarding available resources and information to develop scopes of work needed to acquire resources.

The points of contact for the Fort AP Hill RSC are John Phillips, Ft AP Hill, (804) 633-8572, and Mark Jones, Performance Group Incorporated, (804) 633-8730.

Environmental Awareness Program at the National Training Center

At the National Training Center, environmental and training briefings are held for the Leader Training Program (LTP), Observer Controller (OC) Academy, Opposing Force (OPFOR) Academy, civilian support personnel, and will soon be given to National Guard and Reserve component units training on Fort Irwin.

Until recently, these had been conducted by a variety of people using various media. They were generally not well organized, complete, easy to follow, or interesting. The ITAM program has taken on the job of gathering information from DPW Natural and Cultural Resources, compliance, EOD, LTP, MEDDAC, and Soldiers putting it in a common format to form more complete briefing.

On-screen multimedia briefings in tandem with simple informational handouts will be used to present essential information to both the home unit and the rotational soldier. The video unit will consist of a laptop computer, a screen, and a portable projector. The portable unit adds flexibility to the setting briefings can take place in and eliminates the longer process of setting up slides and overhead projectors. Because a variety of subjects are covered in the same media, a change of speakers will not increase the time or interrupt the flow of the briefings. Also, a unit can be sent a copy of the briefings on CD or over the internet prior to arrival at Fort Irwin. This should maximize the number of soldiers and personnel receiving a



complete set of environmental awareness products.

The purpose is to give the soldier's, civilian's and family members information necessary to be safe at the NTC. POC is Wayne Johnson, Ft. Irwin NTC ITAM Program Manager. DSN 470-3169. COM (619) 380-3169.

GIS NEWS

ITAM GIS Interfaces

Some installations have created ITAM GIS interfaces for ARC/Info to meet the needs of their installation ITAM staff. In order to reduce redundancy (and save Army \$\$), if you have developed such a tool at your installation, please contact Terri Bright, USAEC, DSN: 584-1563; tabright@aec.apgea.army.mil.

ITAM GIS Products for Trainers/Testers

USAEC is compiling a list of ITAM-related GIS analyses/maps/tools that specifically supports the Army's training mission. This information will help GIS operators best meet the needs of their installation ITAM staff. Please send information to Terri Bright DSN: 584-1563; tabright@aec.apgea.army.mil.

Data Standards Update

Tri-Services CADD/GIS Center is due to complete Version 1.6 of the Tri-Service's Spatial Data Standards (TSSDS) this January. Version 1.6 includes the Corpsmet Metadata Generation Tool. To be added to TS's mailing list or to obtain the revised TSSDS once it's completed (previous versions are unavailable), call Martha Pettway at (601) 634-4109. For questions regarding metadata, call Laurel at (601) 634-4484.

GIS Inventory Assessment

Ft. AP Hill GIS Regional Support Center (RSC) has developed a draft GIS inventory assessment worksheet. The worksheet can be used to assess which data layers an installation has and record the format and location information. Once completed, an installation can determine the status of their GIS, prioritize their GIS needs, and formulate a plan to achieve a more viable GIS database. This tool can also facilitate communication between installation tenants and encourage data sharing. For a copy of the worksheet, call John Phillips at DSN 578-8752.

GIS Assistance Available AND IT'S FREE!

USAEC funds CSU's CEMML to provide supplemental ITAM-related GIS support to installations. Call (970)491-7190 or e-mail support@levity.cemml.colostate.edu.



Military Map Symbolology for ARC/Info - FREE!

ESRI, developer of ARC/Info GIS, has created over 80 standard military symbols that can be used to create specialty maps for Army trainers. ESRI will send the data set to you free of charge. Call Dennis Smith at (703) 506-9515.

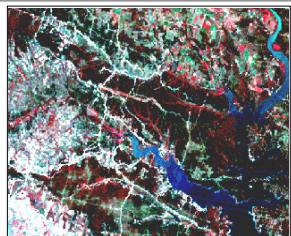
GIS Regional Center Status Report

National Guard Bureau is currently providing centralized GIS support to certain National Guard installations through a contract awarded to Utah State University (USU). USU also serves as the GIS data repository for the Guard. Contact MAJ Aaron Price for more information DSN: 327-7996.

Since JAN 96, Ft. Hood has provided ARC/Info, GRASS, and Intergraph MGE support to Ft. Sill, Camp Bullis, and Pine Bluff Arsenal through a USAEC delivery order with Horne Engineering Services, Inc. Ft. Leonard Wood was recently added to the list of supported installations. For more information contact Terri Bright, USAEC, DSN: 584-1563.

Ft. AP Hill recently began GIS regional support operations for Forts Eustis and Lee. Ft. AP Hill ITAM Coordinator and GIS Regional Support Center Manager, John Phillips, and Performance Group Inc. (PGI) focus on providing installations with the tools and training they need to support themselves with GIS. The team envisions one day having a "self-service" GIS station that will allow authorized civilian and military personnel to easily create their own customized maps, thereby allowing GIS personnel more time for technical GIS tasks. Call John Phillips for more information DSN: 578-8752.

REMOTE SENSING USERS' GUIDE



Pt. Hood, Texas; 1989 TM scene

Draft - Version 1.0
January 1997

Prepared by:

Terri A. Bright, USAEC
Steven Getlein, TEC
Joni Jarret, TEC

Jointly Produced by:

the U.S. Army Environmental Center (USAEC), and
the Topographic Engineering Center (TEC)

Remote Sensing Users' Guide

As a joint effort, the USAEC and the Topographic Engineering Center (TEC) developed a comprehensive remote sensing users' guide. According to the USAEC, the user's guide contains valuable information for experienced and less experienced ITAM and natural resources managers at Army installations.

The guide contains sections on sensor selection by ecoregion and objective, sensor fact sheets, and procurement.

USAEC considers the guide to be a "living document" and encourages input from the field regarding modifications.

ITAM installations will receive the guide by February 1997; final revisions and editing are in progress. Non-ITAM installations may request a copy of the user's guide from

Ms Terri Bright

USAEC

DSN: 584-1563

email: tabright@aec.apgea.army.mil

The guide will also be available on the ITAM Homepage.

Source for USGS

Quads

Fort AP Hill needed 10 ft. vector contour lines for the Installation. After contacting the USGS, a cheap source for this data was found. LandInfo Inc.; 2280 Xanadu Way; Suite 290; Aurora, CO 80014; (303) 369-6800; WWW.landinfo.com, was found to have this data available on CD-ROM. They have scanned raster images of each USGS 7.5 min. 1:24,000 quadrangles for \$99/quad. They also have the 10 foot vector contour data for \$499/quad. **DISCLAIMER:** Fort AP Hill does not receive monetary kick-backs from LandInfo Inc., nor should this be construed as an endorsement of LandInfo. For more information call John Phillips at Fort AP Hill ITAM (804) 633-8752. DSN 578-8752.

GIS Saves Army Units Time & Money

During the summer annual training at Fort AP Hill, the ITAM GIS technician provided cartographic outputs to the units. Once the unit commander cleared the request through DPTMS, they received the output and a questionnaire. A summary of the questionnaires showed that the GIS outputs saved the units over 738 hours (mostly during the advance party pre-planning). The GIS technician spend 180 hours providing this service. Although this is not the primary focus of the GIS, as a secondary by-product it supports environmental awareness by showing restricted use areas and it also supports TRI by integrating the training requirement to the land best suited for that mission. For more information, call John Phillips, Ft. AP Hill ITAM Coordinator (804)633-8752.

WSMR LRAM Projects Designed to Return Acreage

Since 1994, LRAM projects designed to return usable acreage, based upon the results of ITAM assessments, have been proposed. Some of these projects include: water spreading, recontouring, prescribed burning, and reseeding. To date, these projects and others have been planned but not funded. On a smaller rehabilitation scale, the 1996 LCTA crew began installing erosion control blankets and reseeding the Multiple Launch Rocket System (MLRS) berms on WSMR. These berms are used as safety barriers between the firing unit and the test evaluators. The berms are showing wind and water erosion and have become to deteriorate. The berms vary in size, but average 100 meters long, 25 meters wide, and 20 meters high. This project is on-going, and the results will be determined through the installation and monitoring of LCTA transects. The point-of-contact for this information is David Anderson (505) 678-2224/7817.

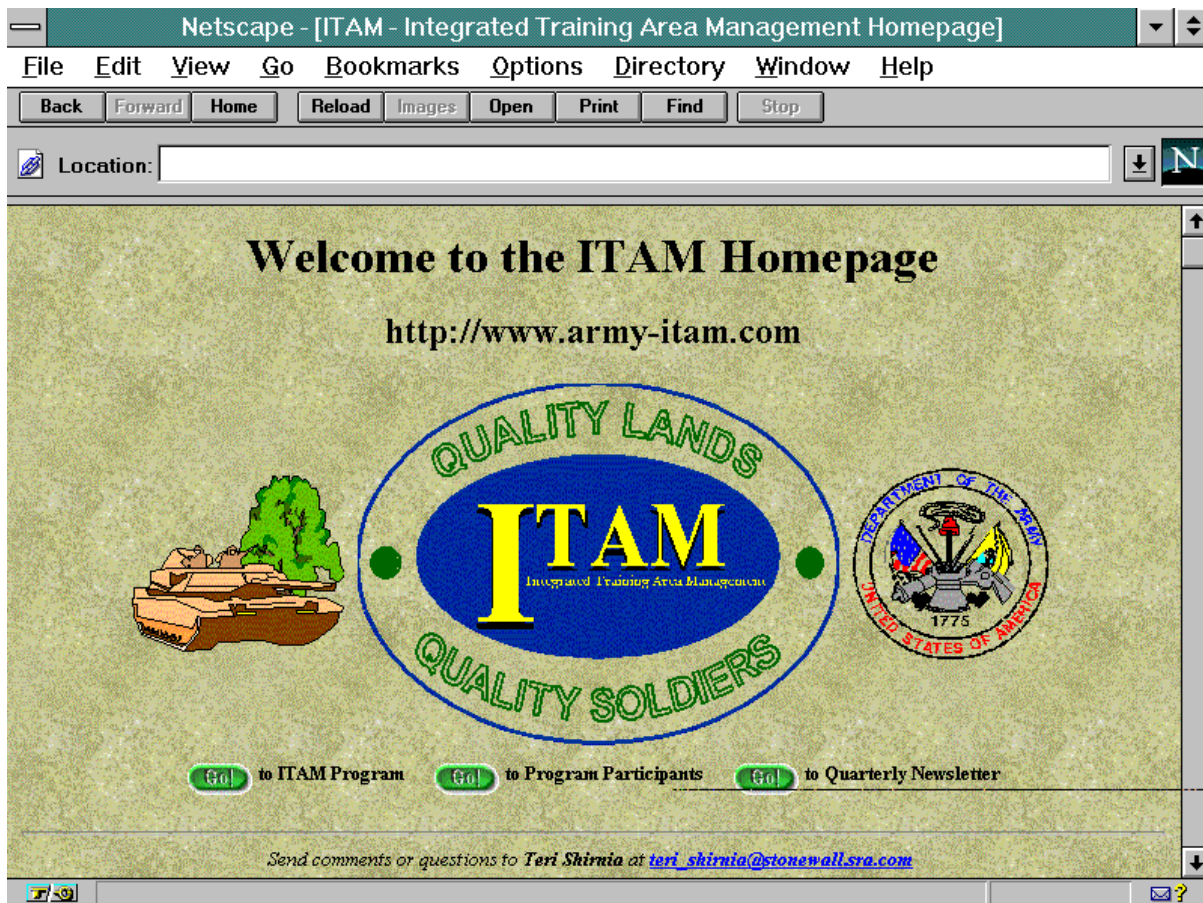
ITAM NOW HAS A HOME ... PAGE THAT IS!

For the latest ITAM events or information on Land Condition Trend Analysis (LCTA), Land Rehabilitation and Maintenance (LRAM), Training Requirements Integration (TRI), Environmental Awareness (EA), or access to prior issues of *The Bridge*, visit the army's newest site at www.army-itam.com

Designed with you, the user, in mind, the ITAM's homepage is easy and quick to use. To navigate to your area of interest, just click on one of the labeled buttons or highlighted words and information, news, or related events.

Besides providing you with the latest ITAM news, the homepage will also serve as a source of ITAM references, such as policy documents, *The ITAM Strategy*, and LCTA II workshop reports. In addition, the Homepage will offer you access to a list of individuals participating in the ITAM program. People accessing the ITAM web site may add their name, and other vital contact information to the list while accessing the homepage.

The homepage will begin service in January 1997. So don't wait any longer, be sure to check out the ITAM Homepage!



... the rest of the story

Key LCTA Issues Identified in 1995

(Continued from Page 1)

- Current plot allocation and field methods do not provide adequate data for installation training land-use decision making, nor do they provide site specific information needed for the Land Rehabilitation and Maintenance (LRAM) or Training Requirements Integration (TRI) components of ITAM.
- There is a need for less intensive and more relevant data collection at each plot.
- Methods must provide information to support training and then to provide information for natural resource managers.
- Data must provide carrying capacity information to help schedule training activities and information for TRI and LRAM.
- LCTA needs standard objectives and data elements, but site specific methods should be flexible.
- LCTA needs Army-wide program goals and possibly common data requirements.
- Specific methods to accomplish the goals and data elements need to be flexible.
- To interpret data and assist with impact predictions, detailed land use information by management unit, i.e., training area, is necessary.

Call for Papers

26-28 August 1997 ITAM Workshop

(Continued from Page 6)

Presentation should be limited to twenty minutes. Should you need additional time, please submit your request along with the title and abstract for your topic.

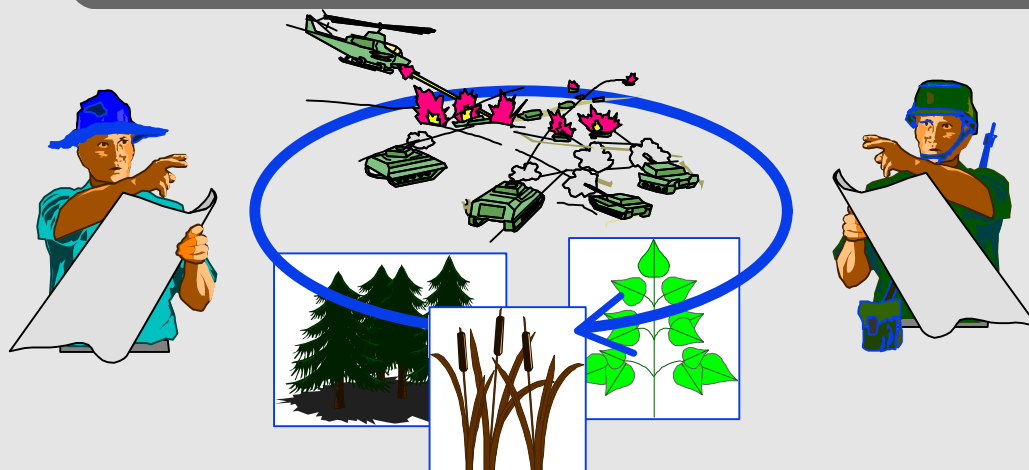
Limit the length of your abstracts to 250 words or less and submit them along with the title, the names and address of all authors. Submissions are to include a 3.5" diskette of the electronic file and two paper copies.

All submissions must be received by no later than 1 March 1997 and must be made to Ms. Gail Pollock at

US Army Armor Center at Fort Knox
Directorate of Public Works
ATTN: ATZK-PWE (Gail Pollock)
Fort Knox, KY 40121-5000

Ms. Pollock may be contacted via telephone at commercial (502) 624-6684 or DSN 464-6684. Her FAX number is 624-3000 or 464-3000.

Training Land: A Priceless Asset
Facilities & Equipment are Repairable & Replaceable
Land is Repairable...Not Replaceable



ITAM ...

**Bridging the
Gap Between
Army Training
and
Environmental
Stewardship**

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**...IN
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The Bridge

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